

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554**

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In the Matter of )  
 )  
Deployment of Wireline Services Offering ) CC Docket No. 98-147  
Advanced Telecommunications Services )

**COMMENTS OF SPRINT CORPORATION**

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## SUMMARY

The Commission has authority to direct industry bodies to develop long-term spectrum management and compatibility standards and to require adherence to them. The T1E1.4 working group of the American National Standards Institute is the appropriate committee to develop compatibility standards, and the Commission should encourage participation in it. Sprint believes that generic masks are the most appropriate tool for defining spectrum compatibility and that they will not restrict the deployment of new technology. Because the greatest potential for cross-talk and other interference within binder groups lies in the feeder cable closest to the central office, different technologies should be segregated into their respective binder groups within the feeder cable to minimize interference concerns.

Sprint recommends convening an ad hoc industry forum of ILECs, CLECs and manufacturers to develop loop spectrum management policies that will apply to both ILECs and facilities-based CLECs. ILECs should not be required to replace interfering technologies, such as AMI T1s, as the market and technology will drive this change.

In order to expedite and simplify dispute resolution efforts, the term “significantly degrade” must be explicitly defined, and a baseline of information must be obtained. CLECs must disclose to the ILECs on a confidential basis the specific type of service they provide over each loop. This information should enable ILECs to respond expeditiously to reports of interference and evaluate any degradation of service. A fast-paced binding arbitration process should take no longer than a week to resolve disputes and determine which party is responsible.

Although line sharing poses substantial administrative complexities, Sprint supports the Commission's tentative conclusion that line sharing generally is technically feasible and should be required unless it would interfere with the primary service on that loop. Without line sharing, the ILEC would have an inherent advantage with customers that want circuit switched voice service separate from broadband services because it would be able to provide both services over a single loop. The issue of the frequency that the incumbent must unbundle for broadband services is best addressed by an industry forum.

A number of operational issues must be resolved before line sharing can become a reality. Sprint recommends the Commission allow ILECs twelve months to modify their systems. Ultimately, the owner of the loop plant, the ILEC, is the most appropriate entity to manage the multiplexing equipment when two carriers share the same loop.

It is critical that line sharing be correctly priced if new entrants are to compete with ILECs. Sprint believes the costing approach used to establish the ILECs' xDSL access charges should be applied to pricing a line-shared loop as an unbundled element. Thus, the party utilizing the analog voice spectrum of the loop should pay the entire cost of the loop (exclusive of xDSL-related equipment), and the party requesting only the high-frequency portion should cover only the incremental costs of the equipment needed to provide broadband service over the loop. This approach would simplify the impact of line sharing on access charges, separations and USF support. In order to protect CLECs from discriminatory and unreasonable practices, however, the incremental cost approach should be subject to an imputation test.

Line sharing will foster competition and benefit consumers. At this early stage in the development of integrated offerings and of local competition itself, the Commission should adopt a flexible approach to line sharing which will enhance competition and the deployment of new services.

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**COMMENTS OF SPRINT CORPORATION**

Sprint hereby submits its comments on the issues of spectrum compatibility and line sharing, raised in the First Report and Order and Further Notice of Proposed Rulemaking released in this proceeding on March 31, 1999 (FCC 99-48) (Further Notice).

**I. SPECTRUM COMPATIBILITY – LONG TERM STANDARDS AND PRACTICES**

In the final order portion of its March 31 release, the Commission adopted some spectrum compatibility and management rules, such as requiring ILECs to (1) provide CLECs with nondiscriminatory access to their spectrum management procedures and policies; (2) disclose reasons for rejecting a CLEC's request for provision of advanced services; and (3) disclose information as to the number of loops in a binder group using broadband technology and the type of technology used. However, the Commission determined that it needed a further rulemaking to address the development of long-term spectrum management and compatibility rules.

Sprint agrees with the Commission (§79) that there should be a competitively neutral spectrum standards setting process relating to the use of different technologies in

the same binder groups of loops, and that this process should include participation of all interested parties, with no party or groups of parties having inherently greater weight (or veto power over) other groups or veto power. Sprint believes that the T1E1.4 working group of the American National Standards Institute (ANSI) is the appropriate body to develop spectrum compatibility standards. We believe that the T1E1.4 is compatible with the Commission's objectives that the standards setting process be neutral in both structure and procedure. Although it operates by ballot, the participation costs are low, and Sprint has been satisfied with the fairness of the results it reaches.

The Commission clearly has the authority to direct industry bodies to develop standards and then to require adherence to those standards. See e.g., Toll Free Service Access Codes, 12 FCC Rcd 11162 (1997), where the Commission incorporated into its rules industry-agreed-on standards and procedures for reserving and utilizing toll free numbers. See also Telephone Number Portability, 12 FCC Rcd 7236 (1997), adopting the industry consensus approach to local number portability (Location Routing Number) and rejecting Query on Release. At the very least, if the Commission has any doubt about its statutory authority, it could establish a strong presumption that an ILEC that acts in accordance with the industry standards is fulfilling its duties under §251(c)(3) to act in a nondiscriminatory fashion in addressing matters of spectrum compatibility and spectrum management with carriers to whom it is furnishing unbundled loops and, conversely, a strong presumption that an ILEC acting inconsistently with those standards is engaging in discriminatory conduct.

Sprint agrees with the Commission's tentative conclusion (¶81) that T1E1.4 is the best forum for developing future power spectral density (PSD) masks. Sprint knows of

no other body that could perform this function. T1E1.4 is the forum where the industry experts reside, and there is no similar assembly of industry expertise in any other forum in North America. The Commission can alleviate its expressed concern (§§81, 85) over possibly excessive representation by incumbent carriers and large manufacturers, by encouraging, in its forthcoming order in this proceeding, all segments of the industry to participate fully in this process. Large carriers, to be sure, have inherent resource advantages over small carriers, but the importance of these issues to competition in broadband communications should be ample incentive for future participation at increased levels from newer entrants into the telecommunications marketplace.

In §§82-83, the Commission seeks comment on whether generic masks would be an appropriate means to address spectrum compatibility, whether this approach might restrict deployment of new technologies that otherwise would not harm the network, and whether a calculation-based approach would be a better tool for defining spectrum compatibility. For the present, Sprint believes that generic masks are the most appropriate tool.<sup>1</sup> They are a sound method of ensuring that designated signals are within desired limits. For each data rate, generic masks are defined, and T1E1.4 quantifies different types of transmission technologies and speed under different masks.

Although the T1E1.4 process inherently takes time, Sprint does not believe that it in any way restricts deployment of technologies that otherwise would not harm the network. Any party can present the working group with its ideas for a new standard. If a

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<sup>1</sup> In the calculation-based approach, vendors that are experimenting with a particular technology are able to perform mathematical and computer simulations to determine if the technology is acceptable vis-à-vis current industry standards. Although this method may be more robust than the hard mask threshold, Sprint lacks sufficient experience with calculation-based modeling to have definitive views at this time.



new technology becomes available, generic masks can be used to analyze it and ensure that it fits within the predefined set of masks and will not introduce interference to other types of services. Although this process may create “windows” of entry for new technologies, it does not ultimately deter the introduction of a legitimate new technology that does not cause interference.

With respect to policies for fairly administering the deployment of new technologies (§86), Sprint believes that the greatest potential for cross-talk and other interference within binder groups lies in the feeder cable closest to the central office, rather than the distribution cable from an intermediate point of concentration to end-user premises. Accordingly, the Commission should focus on binder group technology management in the feeder cable. Despite concerns expressed by some CLECs (§86), the approach Sprint recommends is that different technologies should be segregated into their respective binder groups within the feeder cable. For example, T1 carrier and ADSL should be in separate binder groups in order to minimize the interference between the two technologies. Additionally, separating other DSL technologies by dedicating specific binder groups to each would reduce the chance of degradation of one DSL technology by another. In particular, Sprint is concerned that the deployment of echo canceled (EC) ADSL will adversely affect the data throughput capacity of frequency division multiplexed (FDM) ADSL. Although both technologies are defined in T1.413, FDM ADSL is currently the only one being widely deployed in North America. If EC ADSL is deployed, it should be subject to appropriate loop length restrictions in order to minimize impact on existing FDM ADSL services. Since binder group management is an important part of ensuring performance qualities for xDSL services, it is imperative that

all carriers using loop plant accurately indicate to the ILEC their use of each facility so that the ILEC can properly manage network facilities.

In ¶86, the Commission also asks how binder group administration practices can be developed and updated. Clearly, a binder group management process must be in place to identify, and take corrective action on, issues regarding spectrum interference. Sprint strongly recommends that an ad hoc industry forum of ILECs, CLECs and manufacturers be convened to develop a policy that is uniform across ILECs and facilities-based CLECs. In this regard, manufacturers can perform mathematical modeling of multiple technologies and would be the best-qualified group to ascertain the types and numbers of technologies that can be safely deployed within a binder group.

In ¶87, the Commission discusses interfering technologies such as AMI T1, which is known to cause significant interference with other services deployed in the network, and asks whether it should grandfather such technologies or establish a sunset period for services using such technologies. In general, Sprint believes that the industry forum that develops binder group management practices and procedures is in the best position, in the first instance, to address the grandfathering, or alternatively, mandatory sunseting of interfering technologies. However, Sprint does not believe that an ILEC should be required to replace existing AMI T1s. Instead, market and technological drivers will be sufficient to cause a timely change. In the case of Sprint's ILEC operations, most of the AMI T1 in its network is used within inter-office toll trunks and in links between host and remote switches, rather than in loop plant. Most of Sprint's T1s use B8ZS technologies today, and all new DS1 installations use ESF/B8ZS technology. As a result, AMI T1s are being removed through gradual attrition. In the meantime, the approach to

binder group management discussed above – separating different technologies into different binder groups – should minimize the interference concerns that this older technology causes. It may also be noted that as ILECs begin to deploy their own xDSL offerings, they will have a heightened self-interest in replacing older technologies such as AMI that could cause interference with their new service offerings.

With respect to dispute resolution processes (see ¶88), Sprint believes that there must be an explicit definition of “significantly degrade” in order to expedite and simplify dispute resolution efforts. Although ultimately the Commission may have to define “significantly degrade,” it would be best to attempt to achieve industry consensus on such a definition through the T1E1.4 committee. At the time an advanced service is installed to a customer premises, a baseline record should be made of speed, noise, bit-error rates, and other pertinent factors so that later tests could measure whether there has been “significant” degradation of service. Furthermore, CLECs must be required to disclose the specific type of service they provide over each loop, both on a going-forward basis and for all unbundled loops they lease today, to the ILEC. ILECs need this necessary detail of the use of their networks, so that the ILECs can manage interference processes properly in engineering their networks, and hopefully preventing problems before they arise. Such disclosure of information from CLECs to ILECs must be kept confidential within the ILEC and used only for technical purposes, so that any legitimate CLEC concerns about the use of this information for marketing purposes (e.g. ILEC targeting of CLEC advanced services customers) could be alleviated. Having this baseline of information should enable ILECs to respond more quickly in troubleshooting when interference reports arise.

In cases where disputes arise, there must be a fast-paced binding arbitration process, that should take no longer than a week, for resolving disputes about whether the performance degradation is "significant" and if so, which party is responsible. To avoid harm to innocent users and their carriers, however, the ILEC should be able to suspend service from the carrier causing the interference problem pending completion of the dispute resolution process, and the carrier found to be causing the interference should pay reasonable compensation to the ILEC for the costs of its troubleshooting activities, and should also compensate the ILEC or CLEC whose services were interfered with in the event that the CLEC had failed to accurately disclose the type of service being provided over the loop causing interference.

In ¶89, the Commission asks whether it should solicit the assistance of a third party in developing loop spectrum management policies. Sprint believes that these policies are best developed through the ad hoc CLEC/ILEC/manufacturer forum proposed above. As able as T1E1.4 is for technical issues, issues that are of a policy nature, or that involve management of outside plant, are beyond its purview. The ad hoc group would be better-equipped to address these types of issues. And during the time that such standards are being formulated, the March 31, 1999 Order herein guarantees that CLECs have access to the loop spectrum management policies currently employed by the ILEC.

In short, the Commission should (1) look to the T1E1.4 committee to establish technical standards for interference; (2) convene an ILEC/CLEC manufacturer forum to develop policies on loop spectrum management; (3) encourage wide participation in both groups; and (4) adopt third party arbitration, with a short time frame for decision, to

resolve specific disputes about interference. Sprint believes these measures will best provide long term opportunities for innovation and deployment of advanced technologies, while ensuring that those technologies are “proved in” spectrally before being approved for general deployment, and then deployed in the network in a way that minimizes interference to others.

## II. LINE SHARING

In its comments in the earlier stage of this proceeding, Sprint opposed the concept of line sharing, (i.e., unbundling only a portion of the transmission capacity of a loop), because of the difficult administrative, costing and pricing issues that line sharing could raise. Since that time, the approaches taken by ILECs that are offering xDSL services on a shared basis with POTS and the Commission’s reaction to these approaches have clarified some of the costing and pricing issues that earlier were of concern to Sprint. Although Sprint continues to believe that line sharing poses substantial administrative complexities, on balance, Sprint now supports the Commission’s tentative conclusion (§99) that line sharing should be required.<sup>2</sup>

The Commission is correct in tentatively concluding (id.) that without line sharing being available to competitive carriers, the ILEC would have an inherent advantage with those customers that wish to buy circuit switched voice service separate from broadband services, because it would be able to provide both sets of services over a single loop. It is technically possible for a competing carrier to use an entire unbundled loop to offer both

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<sup>2</sup> Sprint also agrees with the Commission’s tentative conclusion in §98 that it has authority to require line sharing. Clearly, the higher-frequency portion of a line is a “capability” that is provided by the loop and associated equipment, and thus falls squarely within the definition of “network element” in §3(29) of the Act.

voice and broadband data services without investing in both circuit-switching and packet-switching technologies. Indeed, Sprint ION, which is in the process of being launched, is designed to do just that. However, it is quite possible that many consumers will want to continue to purchase POTS from their ILEC and will want only data services from a competing carrier. Clearly, for those customers, the competing data carrier would be at a decided disadvantage if it had to buy an entire loop for its data service when the ILEC could use a single loop for both voice and data services.

Rather than attempt to define the frequency above that used for analog voice service, for purposes of clarifying exactly what the incumbent must unbundle (see ¶100), Sprint believes that it is preferable to leave this issue in the first instance to development of a consensus industry standard through a body such as ANSI (which could then refer the issue to an appropriate committee), after which the Commission can establish the consensus standard as a requirement. It is true that setting a specific dividing line between the low frequency channel and the high frequency channel on the loop could limit the use of new technologies. However, Sprint believes it is the lesser of two evils, since the lack of a specific dividing line would add complexity to the standards and to operational administration of line sharing. For example, there would be more complexity in record keeping, more inventory and maintenance of various filters or line sharing devices might be required, etc. But again, Sprint believes that this issue is best addressed in the first instance by an appropriate industry forum.

**A. Technical Issues**

Sprint agrees with Commission's tentative conclusion (¶103) that line sharing is, as a general rule, technically feasible. Indeed, this is demonstrated by the fact that so

many ILECs are utilizing line sharing in their deployment of POTS and xDSL services over the same loop. However, some limitations should be noted.

First, some loops, such as copper loops over 18,000 feet long and those using digital loop carrier technology, cannot be used for xDSL services today and thus may not be candidates for line sharing. Rather, line sharing would appear to be most feasible in the case of pure copper facilities less than 18,000 feet long, at least until next generation DLCs with more robust capabilities become available and are deployed in the network. Line sharing should not be required in circumstances where use of a portion of the loop for broadband data would interfere with analog voice service, but, as the Commission tentatively concluded in ¶104, incumbent LECs should be required to perform loop conditioning such as removing bridge taps or cleaning of splices along the loop, that would permit its use for data services as long as it would not interfere with provision of analog voice over the same loop.

Second, some of the technologies used to provide voice services make the loop unsuitable for broadband sharing. For example, HDSL, ISDN and DAML ("Digital Added Main Line") technologies take up more of the frequency band of the loop than is normally used for analog voice, and it would be impractical, and cause too much interference, to place broadband data above the frequencies used by these technologies.

Third, some broadband technologies are not suitable for line-sharing. Specifically, the "G.Lite" version of xDSL, which is intended to avoid the need for a POTS splitter at the customer premises end of the loop, would cause too much interference between voice and data in a line-sharing context.

**B. Operational and Administrative Issues**

There are a number of operational issues that would have to be addressed and resolved before line sharing can be a reality (see Further Notice, ¶105). In general, when a requesting carrier purchases a loop as a UNE, it should receive the full capability of the loop. However, in circumstances in which the loop already has xDSL equipment on it, if the requesting carrier only wants to provide analog voice service on the loop, it should be permitted to purchase only the analog frequency portion of the loop, leaving it to the ILEC or another requesting carrier to purchase the data capabilities. If a requesting carrier initially purchases the entire capacity of the loop, but intends to provide only voice service, that carrier's permission should be required before the ILEC or another requesting carrier be permitted to put additional electronics on the loop and use the broadband data capabilities of the loop.

To permit line-sharing, ILECs would have to alter their back-office systems in significant ways to permit them to keep records of lines showing the multiple carriers involved, the services or features on the lines, etc. Similarly, modifications to trouble reporting and billing systems will be needed to reflect the fact that more than one carrier is using the same loop. Then the OSS interfaces will have to be adapted to reflect these added complexities. Current operations support systems simply do not support line sharing. For example, the cable assignment system can identify only one provider on a line, the dispatch system for maintenance personnel assumes only one subscriber address, and receive/repair system is limited only to one carrier on a facility. Furthermore, current automated test systems cannot perform POTS testing in line sharing applications. If such testing is conducted, the data portion will be rendered inoperative and result in extra



dispatches of service personnel, plus obvious inconvenience to the party using the data capabilities of the line.

In addition to these changes in back-office systems, procedures will have to be developed to facilitate line sharing while minimizing the risk of interference between users of the same loop and between users of that loop and services provided to customers over other loops in the same binder group. For example, in the prequalification process, the ILEC must be able to identify the potential disturbers to the requesting carrier (e.g., whether the wire pair serving the requesting carrier end user is close to AMI-T1, or another potential disturber) so that the requesting carrier will have notice in advance that it may be attempting to make use of a facility that is simply not appropriate for line sharing. This communication must be reciprocal, to cover instances in which the CLEC has the initial use of a facility and the ILEC attempts to add an advanced service over an adjacent loop.

All of these systems and procedures will need to be modified, and if the Commission does require line sharing, it must allow ILECs adequate time – Sprint recommends twelve months – to modify their systems.

Ultimately, the owner of the loop plant -- the ILEC -- is the most appropriate entity to manage the multiplexing equipment when two carriers share the same loop. The ILEC has overall responsibility for providing electrical continuity and loop balance and, as discussed above, is in the best position to handle spectrum management issues within its network. However, depending on which service is having trouble and which carrier is providing that service, CLECs may also have responsibilities to cooperate with the ILEC

on matters of testing, maintenance and repair, and must take responsibility for interference problems that their equipment may be causing.

**C. Cost/Pricing Issues**

In ¶106, the Commission asks for comment on economic, pricing and cost allocation issues that may arise from line sharing, including impacts on access charge regimes, universal services mechanisms and the like. So far as Sprint is aware, none of the major ILECs that have filed federal tariffs for xDSL services that share a loop with POTS have allocated any loop costs to the xDSL service. In rejecting Northpoint's price squeeze argument, the Commission agreed with GTE's allocation of only incremental costs to its ADSL offering when the loop facilities can support multiple services.<sup>3</sup> Sprint believes this de facto industry costing approach used to establish the ILECs' xDSL access charges should also be applied to pricing a line-shared loop as an unbundled network element. Thus, the party utilizing the analog voice spectrum of the loop should pay the entire cost of the loop (exclusive of xDSL-related equipment); and the party requesting only the high-frequency, broadband data portion of the loop should be required to cover only the incremental costs of the equipment needed to provide data service over the loop (e.g., POTS splitters, DSLAMs, xDSL line cards and next generation digital loop carriers, etc.).

Not only is this approach consistent with the way ILECs have allocated costs between their own line-shared services, but it also greatly simplifies the impact of line sharing on access charges, separations and USF support. There needs to be no change in either access charge or universal support mechanisms and no change in the way the loop

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<sup>3</sup> GTOC Transmittal No. 1148, 13 FCC Rcd 22466, 22482-3 (GTE DSL Order).

is treated for purposes of jurisdictional separations, since all of these costs will continue to relate to the analog voice portion of the loop, as they do today. Any attempt to split the loop cost between POTS and broadband services would greatly complicate all of those issues and could also call into question rates for local service as well. If the data portion of the loop were assigned a portion of the loop costs, the ILEC's cost of providing local service would be reduced, and one would expect that the subscriber's bill for local service should be reduced as well. On the other hand, as long as basic local rates may not fully recover local service costs, and support continues to be provided by implicit mechanisms (above cost access charges, above cost charges for optional features and functions, etc.), or explicit USF support mechanisms, it is not self-evident how a reduction in loop costs (as a result of line sharing) should be reflected in local rates. Allocating none of the loop costs to local data services will allow federal and state regulators to continue to work through these already difficult problems without introducing an added layer of complexity for those customers who choose to receive data services over the same loop as their voice services.

In order to protect CLECs from discriminatory and unreasonable practices, however, the incremental cost approach discussed above should be subject to an imputation test. Specifically, the retail price charged by the ILEC for its offering of data services over a shared loop must be compared to the incremental common costs, (i.e., the incremental costs of providing data capabilities over the loop that are incurred regardless of whether the data services are provided to the ILEC itself or to another carrier) that it is seeking to impose on requesting carriers in the UNE price for the broadband portion of the loop. If those common incremental costs are greater than the amount charged by the

ILEC for its own retail data service, then the recovery of those common incremental costs from the CLEC must be capped at the ILEC's retail level. Otherwise, the ILEC would be engaging in a classic price squeeze. On the other hand, non-common incremental cost (costs the ILEC incurs in offering a line-shared data loop to another carrier that it does not incur when it itself engages in the line sharing) should be borne by the requesting carrier. However, based on mature demand quantities, Sprint would expect that those non-common incremental costs should be very small – perhaps on the order of \$1-2 per month – and any attempts by ILECs to impose non-common incremental costs above this level should be closely scrutinized.

As long as it is correctly priced, consistent with Sprint's proposals discussed above, Sprint believes that line sharing, as an alternative to full loop unbundling, is critical to the ability of new entrants to compete with ILECs. Absent this alternative, a CLEC offering broadband services, but having to purchase the entire loop as a UNE, will not be able to compete with ILEC retail prices for such services, which are not set to recover any portion of the loop cost. This opportunity for line sharing in turn will foster competition in data services. Consumers will benefit from the availability of multiple service providers, and the price and quality of service competition created thereby. This should in turn accelerate the price reductions and service innovations that might not otherwise occur if line sharing were the exclusive province of the ILEC.

Line sharing should also help to ensure network efficiencies and cost-effective investment in local exchange facilities. A properly priced line sharing alternative will obviate the need for CLECs providing data services to buy the entire loop and thus obviate the need for the ILEC to have a second loop to the premises in circumstances

where the end-user wishes to obtain analog voice service from a carrier other than the data CLEC. Instead, duplicative loop facilities will be constructed only in those instances where a lower cost can be achieved or the bundling of multiple services warrants such additional investment.

Finally, the Commission asks (in ¶107) for comment on the continued viability of line sharing arrangements as the network migrates from circuits switched voice to packet switched voice. Sprint's integrated ATM-based service, Sprint ION, is an example of an integrated offering that can handle both traditional voice services and high-speed data services over a single communications path. If this and other services become widespread in the marketplace, they may well supplant the need for, and demand for, line sharing between circuit switched voice and packet-switched data services. However, with the integrated services still in their infancy, it is too early to tell what consumers will ultimately demand. It is entirely conceivable that many consumers may wish, for whatever reason, to continue to have analog, circuit-switched voice services to their premises alongside the newer and more sophisticated integrated offerings. For example, a consumer subscribing to Sprint ION might wish to continue to have a single-line telephone service provided by the ILEC, while using Sprint ION for the second or third lines into the premises and using Sprint ION for the Internet or other data requirements as well. If that is how the marketplace develops, then there may be a continued and important role for line sharing for the indefinite future. At this early stage in integrated offerings and indeed in local competition itself, the Commission should not attempt to prejudge how service offerings will develop in the marketplace over the next several years. Rather, it would best serve the pro-competitive purposes of the 1996 Act by

COMMENTS  
SPRINT CORPORATION  
JUNE 15, 1999

making as many avenues for deployment of both traditional and advanced services  
available as is technically possible.

Respectfully submitted,

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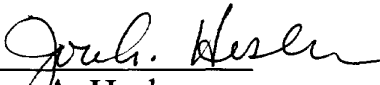
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June 15, 1999

**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing document in CC Docket No. 98-147 was Hand Delivered or sent by United States first-class mail, postage prepaid, on this the 15<sup>th</sup> day of June, 1999 to the parties listed below.

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